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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,573	11/24/2003	Toshio Morii	245632US0	1226

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EXAMINER	
MARCHESCHI, MICHAEL A	

ART UNIT	PAPER NUMBER
1755	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/718,573	MORII ET AL.	
	Examiner	Art Unit	
	Michael A. Marcheschi	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-8,10-15 and 17-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-8,10-15 and 17-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 5, 6 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwertfeger et al.

The reference teaches in column 3, lines 15-25, column 4, lines 7-15, column 4, lines 53-57 and column 5, lines 56-60, a **stable** fumed slurry having a silica solids content of at least 80% comprising a bimodal distribution (large and small sized particles) of silica particles. The small sized particles are fumed silica having a size of 1-400 nm present in an amount of 1-50% of all the solids. The large sized particles can have a size of 1 microns (1000 nm). The amount of these particle is implied to be the balance of the solids content (i.e. can be 50% of the solids, since the amount of small particles can be 50%). The large silica is defined as being a finely divided silica and column 4, lines 53-55 define finely divided silica as being fumed silica. In view of the above teachings both silica particles can be fumed silica. The silica particles are mixed with a solvent (water or alcohol) to make the dispersion. The slurry is stable (column 5, lines 56-60) and pourable.

With respect to the solids content, this is disclosed by the reference.

With respect to the average size, the reference teaches that 2 different sized fumed silica materials can be used to make the bimodal slurry. As defined in the above teachings, the small sized fumed silica having a size of 1-400 nm and can be present in an amount of 50% of the solids. The large sized fumed silica particles can have a size of 1000 nm and are present in the balance amount of the total solids (i.e. 50%). Assuming the small size particles are 400 nm and

present in a concentration of 50% and the large sized particles are 1000 nm and present in an amount of 50%, the average size of the 2 different sized particles is 700 nm or 0.7 microns (reads on claimed range).

With respect to the size ratio, it is the examiners position that any aggregates in the slurry minimize the ability to make a high solids content slurry as well as minimize the ability to make a low viscosity slurry (pourable). Since the reference teaches both a high solids content slurry and a pourable slurry, it is the examiners position that the particles are unaggregated. In view of this, the size defined by the reference can be considered the primary particle size. Since the particles are unaggregated, the secondary size can also be the same as the primary size and thus the primary and secondary (aggregate) size ratio can be 1, reading on the claimed ratio. The claimed ratio is apparently indicating the same thing (secondary/primary size ratio). In addition, as can be seen from the instant specification, (1) the claimed low viscosities (these viscosities are implied or suggested by the reference when it is stated that the slurry is stable and pourable) and (2) a high solids content (reference teaches this) are a result of the claimed size ratio. Thus if the viscosities and solids content of the reference are the same, the claimed ratio is apparent because a composition having similar viscosity values, coupled with other criteria that are similar (size and solids content), is expected to have similar properties (i.e. ratio) that would result in said viscosity (pourable). In other words, it appears that the claimed viscosity is a direct result of the claimed ratio and since the claimed viscosity is implied by the reference, the claimed size ratio is indirectly suggested absent evidence to the contrary.

With respect to the viscosity, the reference clearly states that the dispersion is pourable and it is the examiners position that this reasonably implies and suggests a viscosity less than 1000 mPa s.

Although the claimed viscosity ratio is not literally defined, it is the examiners position since the reference teaches a stable slurry, it broadly reads on the claimed ratio because it is the examiners position that a stable slurry will have viscosity values that do not appreciably differ from one another at the time of mixing and after storage absent evidence to the contrary.

With respect to the impurity limitation , the reference is silent with respect to impurities, thus it is the examiners position that this indicates that the silica is pure and therefore reads on the claimed limitations absent evidence to the contrary.

With respect to the water limitation , the reference uses "water" and this broadly encompasses distilled water.

With respect to limitation of claim 23, the reference clearly defined this.

With respect to claim 2, the solids content of the reference and the solids content of the claimed invention are extremely close enough, thus it is the examiners position that obviousness still exist because the ranges are close enough (difference can be 0.000000001%) that one would not expect a difference in properties. ***In re Woodruff 16 USPQ 2d 1934 (Fed Cir 1990); Titanium Metals Corp. v. Banner 227 USPQ 773 (Fed Cir 1985) and In re Aller 105 USPQ 233 (CCPA 1955***

Claims 7, 8, 10-15, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwertfeger et al., as applied to claim 1 above and further in view of Inoue et al.

Inoue et al. teaches in claim 1 that fumed silica slurries are known to be used to polish silica wafers (in semiconductors).

As defined above, the primary reference teaches a high concentration fumed silica slurry. Although this reference does not literally define the use of the fumed silica (for polishing), it is the examiners position that one skilled in the art would have found it obvious to use the silica sol defined by the primary reference as a polishing material for polishing semiconductors motivated by the fact that the secondary reference teaches that fumed silica slurries are generally known to be used for this purpose. One skilled in the art would have appreciated that the fumed silica slurries according to the primary reference can be used in known conventional manners and since a polishing material is a known conventional use of fumed silica slurries, as clearly shown by the secondary reference, it use in this manner would have been appreciated by the skilled artisan.

.Applicant's arguments with respect to all the claims have been considered but are moot in view of the new ground(s) of rejection.

However, the examiner will comment on applicants analysis of Schwertfeger et al. Applicant state that this reference teaches a mixture of fused silica and fumed silica, thus not reading on the instant claims. As clearly defined above, the silica materials of the reference can be all fumed silica and not the mixture as argued.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/06
MM

Michael A Marcheschi
Primary Examiner
Art Unit 1755